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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/469,670	12/22/1999	FREDERICK H. SKOOG	23106/74075	5255

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EXAMINER
ODLAND, DAVID E

ART UNIT	PAPER NUMBER
2662	5

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/469,670	SKOOG, FREDERICK H.
	Examiner	**Art Unit**
	David Odland	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-6</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). <u>3</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites "A protocol for a portable router framework..." In the networking arts, a protocol is a set of rules used by an element of a network, wherein the rules are implemented by either hardware of software means. Since the claimed invention is not a process, a machine, a manufacture nor a composition, it is therefore non-statutory subject matter.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3.   Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "...the protocol..." in line 3. Since three different protocols where previously recited (i.e. the protocol of the invention, a main processor protocol and a packet flow processor protocol), it is unclear which protocol is being referred to.

Claim 3 recites "...ingress and egress ports of an PFP..." This limitation is confusing;

the claim earlier recites that the PFP is a driver and not a physical device, therefore it is unclear

how it can have ports.

Claim 5 recites "...the transport media protocol..." in line 3. There is a lack of

antecedent basis for this limitation in the claim.

Claim 6 recites "...the PFPs". There is a lack of antecedent basis for this limitation in the

claim.

Claims 2-6 are rejected because they depend on claim 1.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

5.   Claims 1-6, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Onishi et al. (USPN 5,434,863), hereafter referred to as Onishi.

Referring to claim 1, Onishi discloses a router framework providing transportation of

messages between a main processor having a protocol and packet flow processors having a

protocol (an RM router manager which inherently operates according to a protocol (see figure

1)), the messages transported via a transport media (packets are transported over a routing bus

(see figure 1)), the protocol comprising:

a Dynamic Routing and Control (DRC) driver for interfacing to the main processor (the

RM router manager performs routing and control (see figure 1 and column 7 and 8));

a transport interface for interfacing between said DRC driver and the transport media (the

RM router manager interfaces the router bus for packet transmissions (see figure 1 and columns

7 and 8));

a Packet Flow Processor (PFP) driver for interfacing to the packet flow processors (RA

routing accelerators are used to process flows of packets (see figure 1 and columns 7 and8));

a transport interface for interfacing between said PFP driver and the transport media (the

RA routing accelerators interface the routing bus (see figure 1 and columns 7 and 8)); and

said DRC driver and said PFP driver transporting messages between the main processor

and the packet flow processors (the RM routing manager and the RA routing accelerators

transport packets between each other (see figure 1 and columns 7 and8)).

Onishi does not disclose that the RM routing manager and the RA routing accelerator further

comprise API's. However, It would have been obvious to one skilled in the art at the time of the

invention to use API's in the system of Onishi because API's are existing software units used by

higher layer applications to perform lower layer operations, therefore the use of this existing

software would reduce the developmental cost of Onishi since entirely new methods of handling

lower layer operations do not need to be created.

Referring to claim 2, Onishi discloses the system discussed above. Furthermore, Onishi

discloses that the messages transported between the main processor and the packet flow

processors include Internet protocol, routing table distribution and control and maintenance

(messages between the RM routing manager and the RA routing accelerator include IP packets

(see column 9), a routing table (see column 7). Onishi does not disclose that control and

maintenance messages are also transferred between the RM routing manager and the RA routing

accelerators. However, the RM routing manager manages the whole system of Onishi(see

column 7 lines 1-5). Therefore, it would have been obvious to one skilled in the art at the time of

the invention to use control and maintenance messages in the system of Onishi because such

messages will help the system perform properly, thereby making the system more reliable.

Referring to claim 3, Onishi discloses the system discussed above. Furthermore, Onishi

discloses that the PFP driver transports traffic messages between ingress and egress ports of a

PFP via the transport media (the RA routing accelerators transmit and receive packets over the

routing bus (see figure 1 and column 7).

Referring to claim 4, Onishi discloses the system discussed above. Furthermore, Onishi

discloses that the traffic includes Internet protocol (the packets transported in the system of

Onishi are IP packets (see column 9)). Onishi does not disclose that the system also transports

multi-protocol labels(MPLS) traffic. However, It would have been obvious to one skilled in the

art at the time of the invention to transport MPLS traffic as well as IP traffic in the system

Onishi because doing so would make the system more versatile in that it can support more than

one transport protocol.

Referring to claim 5, Onishi discloses the system discussed above. Furthermore, Onishi

discloses that the DRC driver translates message format and routing information between the

main processor protocol and the transport media protocol (routing information in the RM routing

manager is packetized in order to by transported over the routing bus to the RA routing

accelerators (see figure 1 and columns 6-8)).

Referring to claim 6, Onishi discloses the system discussed above. Onishi does not

disclose that the DRC driver includes a routing table including addresses of the PFPs. The RM

routing manager must inherently know the addresses of the RA routing accelerators since it

needs to control each one of the and send them information via the routing bus. However, it

would have been obvious to one skilled in the art at the time of the invention to implement the

addressing of the RA routing accelerators in a routing table because without a table the RM

routing manager would have to broadcast to all accelerators any information it wanted to send to

a particular accelerator, thereby wasting bandwidth of the routing bus.

Conclusion

6.   The following prior art, which is made of record and not relied upon, is considered

pertinent to applicant's disclosure:

   a.   U.S. Patent Number 6,157,955 to Narad et al.

   b.   U.S. Patent Number 5,619,650 to Bach et al.

   c.   Article: *IP Multicasting Shortcut Over ATM: A Winner Combination* by

Dumortier et al., IEEE 1998

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday

– Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the

organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

June 27, 2003

JOHN PEZZLO
PRIMARY EXAMINER